

**AMENDMENTS TO THE DRAWINGS:**

The attached two (2) sheets of drawings include changes to Fig. 2 and Fig. 3. These sheets, which include Figs. 1-2 and 3-4, replace the original sheets including Figs. 1-2 and 3-4. In Fig. 2, the reference characters 112, 114, 116 and 118 have been removed. In Fig. 3, the reference characters 214 and 216 have been removed.

Attachment: Two Replacement Sheets

### **THE OFFICE ACTION**

In the Office Action issued on August 4, 2005, the Examiner objected to the drawings because reference numbers were not included in the specification.

The Examiner objected to the disclosure because it was unclear if all the elements or at least one of the elements in the parenthesis in the formulas are required. The Examiner also objected to the specification for failing to provide proper antecedent basis for the claimed subject matter in claims 12-14, 16, 24, 27-35, 38, 40-45, 47, 48 claims 51, 53, 61 and 63. The Examiner also objected to claims 11, 26, 67 because they contained large gaps between the formulas and between the parts of the formulas. Claim 61 was objected to by the Examiner under 37 CFR 1.75 as being a substantial duplicate of claim 51.

The Examiner rejected claims 11, 12, 26, 27, 48, 50, 52, 60, 62, 67, 68 and 73 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. In particular, The Examiner rejected claims 52, 62 and 73 as being indefinite, claims 50 and 60 as being duplicates and claims 11, 12, 26, 27, 48, 67 and 68 as being indefinite. The Examiner further rejected claim 36 under 35 U.S.C. §102(b) as being clearly anticipated by U.S. Patent 4,550,256 to Berkstresser, et al. The Examiner also rejected claims 1-3, 6-8, 10, 11, 36 and 38 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,998,925 to Shimizu, et al. Claims 1-3, 6-8, 13, 14, 36 and 38 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by WO 01/8452 to Kummer, et al,. The Examiner further rejected claims 1-3, 6-8, 10, 13, 36 and 38 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,669,866 to Kummer, et al. which is the U.S. member of the patent family based on WO 01/8452. Claims 1-3, 5-8, 13, 14, 36 and 38 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by WO 01/93342 to Ellens, et al. The Examiner further rejected claims 1-3, 5-8, 10, 11, 13, 14, 36 and 38 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,504,179 to Ellens, et al. which is the U.S. member of the patent family based on WO 01/93342. Further, the Examiner rejected claims 1-3, 5-7, 9, 13, 14 and 36038 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,596,195 to Srivastava, et al. Claims 1-3, 5-8, 10, 11, 36 and 38 were rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by U.S. patent application publication 2004/159846 to Doxsee, et al. The Examiner rejected claims

1-3, 5-8, 10, 11, 36 and 38 were provisionally rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by copending Application No. 10/368,115.

Claims 49, 50 and 54-60 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over the abstract for the article by Pinalli, et al. The Examiner also rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patents 5,998,925; 6,596,195, 669,866 or 6,504,179 or WO 01/8452 or WO 01/93342 in view of U.S. Patent 6,335,548 to Roberts, et al. Further, the Examiner rejected claims 1-3, 6-8, 10, 13, 36 and 38 under 35 U.S.C. §103(a) as being unpatentable over WO 01/8452 or U.S. Patent 6,669,866. The Examiner also rejected claims 1, 2, 5-7, 9 and 36-38 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over U.S. Patent No. 6,596,195. Also, claims 1-3, 5-11 and 36-38 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending Application No. 10/368,115.

The Examiner indicated that claims 15-25, 28-35, 39-47, 64-66 and 69-72 were allowed.

### **REMARKS**

Amendments have been made to the abstract, drawings, and claims to address the Examiner's objections/rejections to these.

Specifically, the reference characters 112, 114, 116, 118, 214 and 216 have been removed from the figures.

In addition, with regard to the Examiner's objection to the disclosure and the use of parentheses in the formulas on pages 16 and 17, Applicants submit that the notation in parentheses after the specific phosphors are merely acronyms by which these specific phosphors are generally known in the industry and do not constitute any part of the formula of the phosphors. The use of parentheses WITHIN a phosphor formula signifies that the phosphor can have any combination of the listed ions, including one or all of them. This notation is common in the art. For example, and with reference to claim 48, the notation  $(\text{Tb}, \text{Y})_3\text{Al}_{4.9}\text{O}_{12-\delta}:\text{Ce}^{3+}$  means that the phosphor can contain Tb and/or Y, and is identical to the notation  $(\text{Tb}_{1-x}\text{Y}_x)_3\text{Al}_{4.9}\text{O}_{12-\delta}:\text{Ce}^{3+}$ , where  $0 \leq x \leq 1$ . Thus, Applicants submit that these claims are not indefinite under §112, second paragraph. Withdrawal of this rejection is respectfully requested.

With regard to the Examiner objection to the specification as failing to provide antecedent basis for the claimed subject matter with respect to the blends with  $(\text{Tb,Y})_3\text{Al}_{4.9}\text{O}_{12.6}:\text{Ce}^{3+}$ , Applicants are somewhat puzzled by this rejection. Nevertheless, in an effort to provide a response to the Examiner, Applicants submit the following. The specific phosphor  $(\text{Tb,Y})_3\text{Al}_{4.9}\text{O}_{12.6}:\text{Ce}^{3+}$  is known as "TAG:Ce" and is discussed in the background section of the present application. Its use in blends of the present embodiments is discussed on page 16, line 8 of the specification. Claim 12 has been canceled. Claim 48 recites the use of TAG:Ce with other phosphors of the present invention. Applicants submit that the specification provides ample antecedent basis for its recitation in the present claims and request withdrawal of this rejection.

With regard to the Examiner's objection to the gaps in the formulas of claims 11, 26 and 67, Applicants submit that these gaps are the result of formatting of the document. In an effort to correct this, Applicants have formatted these claims to be left justified.

With regard to claims 52, and 73, the extraneous  $\text{Ce}^{3+}$  has been deleted.

Claims 60 and 62 have been canceled as being substantial duplicates of claims 50 and 52.

With regard to claims 11, 26, and 67, the parentheses have been removed from the list of phosphors. In addition, the redundant phosphors have been removed from the claims as well.

**A. The Claims are not Anticipated by the Cited References**

The Examiner rejected claims 1-3, 5-8, 9, 10, 11, 13, 14, 36 and 38 under 35 U.S.C. §102(b). Applicants respectfully traverse.

Claims 1 and 36 have been amended to recite that the phosphor has the formula  $(\text{Tb}_{1-x-y-z-w}\text{Y}_x\text{Gd}_y\text{Lu}_z\text{Ce}_w)_3\text{M}_r\text{Al}_{s-r}\text{O}_{12+\delta}$  wherein x and y are both now >0. That is, the phosphor contains Tb, Y, and Gd ions. None of the cited references discloses or suggests such a phosphor containing all of these ions or a light emitting device containing such a phosphor.

In light of the above, Applicants request withdrawal of the §102 rejections.

**B. The Claims are Patentable Over Pinalli**

The Examiner rejected claims 49, 50 and 54-60 based on Pinalli. Applicants

respectfully traverse.

Claim 49 has been amended to recite that  $0 \leq w \leq 1$  in the phosphor formula. In contrast, Pinalli teaches an Eu activated  $\text{Ca}_3\text{Sc}_2\text{Ge}_3\text{O}_{12}$  phosphor. This would correspond to  $w=3$  in the claimed phosphor, which is outside the scope of the claims. Because Pinalli does not teach or suggest the claimed phosphor, it fails to render the claims unpatentable under §103. Withdrawal of this rejection is respectfully requested.

Claims 1-11, 13-54, 56-59, 63-73 remain pending in the application.

### CONCLUSION

It is respectfully submitted that the subject application is now in better condition for examination.

Respectfully submitted,

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Oct 18, 2001  
Date

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Attachment: Two Replacement Sheets  
(Figs. 1-2 and Figs. 3-4)